Taking Aim Against Tick-Borne Lyme Disease
As another year draws to a close, the College of Agriculture and Natural Resources has much to be proud of. Despite an extraordinarily grim economic climate—which has resulted in difficult and painful decisions affecting the lives of valued staff—we continue to achieve our mission of conducting cutting-edge research, offering stimulating and relevant academic programs, and providing outreach programs that improve the quality of life enjoyed by Maryland residents.

The work of Dr. Utpal Pal on Lyme disease is an example. As the cover article in this issue of Momentum explains, Lyme disease poses a serious human health threat. Dr. Pal and his research team are conducting research that may lead to an effective vaccine against the bacterium that causes the disease.

Our Extension faculty and staff have been equally busy...conducting programs such as Grow It Eat It, which helps people grow healthy and nutritious food right in their own backyards, or developing new education efforts like the Maryland Master Naturalist Program to provide concerned citizens with the opportunity to have a positive impact on the state’s natural environment.

And given that one of our primary goals as a college is to prepare students for successful careers, we are always looking for ways to enhance our undergraduates’ educational experience...with great success. Two recent graduates share their thoughts on their time with us and the role it played in the lives they lead today.

So as you celebrate this joyous holiday season with friends and family, I hope you’ll take a few minutes to read the final issue of Momentum for 2009 and reflect on the many and diverse ways we continue to have a positive impact...both on individuals and society at large.
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- Animal and Avian Sciences
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- Plant Science and Landscape Architecture
- Institute of Applied Agriculture
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AGNR Faculty to Teach Courses for New Curriculum

Courses offered by four faculty in the College of Agriculture and Natural Resources (AGNR) are among 24 selected as part of the “I” series of signature courses for a new general education curriculum being introduced at the University of Maryland in 2010. The “I” stands for issues, imagination, intellect, investigation, inspiration, and implementation. Chosen from more than 50 submissions, the selected courses are designed to focus on contemporary topics—and “big” questions—rather than the introductory material traditionally found in CORE classes. The university’s overhaul of CORE is part of its strategic plan, approved last year by the university senate.

AGNR’s I courses are “Specialty Crops: Plantation Agriculture to Globalization” taught by Dr. Christopher Walsh of the Department of Plant Science and Landscape Architecture; “Greening Cities: Who Wins, Who Loses, and Who Cares?” developed by Dr. Marla McIntosh of the Department of Plant Science and Landscape Architecture; and “The Chesapeake Bay Ecosystem: Intersection of Science, Economics and Policy,” which will be taught by Dr. Doug Lipton of Sea Grant Extension Programs, and Dr. Doug Parker of the Department of Agricultural and Resource Economics.

Extension Faculty Honored at National Ag Agents Meeting

Two University of Maryland Extension (UME) faculty received major awards at the recent 2009 National Association of County Ag Agents (NACAA) Annual Meeting and Professional Improvement Conference in Portland, Oregon.

Willie Lantz, a UME educator in Garrett County, was honored with an Achievement Award, which is presented to individuals with less than 10 years of Extension service who are selected by their peers for excellence in their field of expertise. Lantz has focused on developing sustainable agriculture enterprises, involving dairy, meat goats, fruits and vegetables, and forestry. He has led a team of investigators looking into the development of day-neutral strawberry production, and also is involved in a multi-county effort to increase participation in community organization and government through the creation of the Western Maryland Rural Leadership Academy.

Susan Schoenian, a regional UME specialist for sheep and goats, took home a Distinguished Service Award. She and her fellow recipients represent the top two percent of the membership of NACAA as chosen by their peers and Extension directors in various states. A 21-year Extension veteran, Schoenian began her career in Maryland in 1988 as an agricultural agent in Wicomico County and later served as a regional farm management specialist. During her career, she has conducted educational programs in livestock production, farm business management, grain marketing, and 4-H.

Both Lantz and Schoenian shared their expertise through presentations at the conference, as did their colleague David Myers, a UME educator in Anne Arundel County who received the NACAA Mid-Career Award.

Gary Coleman Receives $3.2 Million NSF Grant

Dr. Gary Coleman of the Department of Plant Science and Landscape Architecture, has received a $3.2 million grant from the Plant Genome Program of the National Science Foundation. The 4-year project, titled “An Integrated Study of Nitrogen Cycling and Storage in Poplar,” involves an interdisciplinary research team that also includes Dr. Ganesh Sriram (Department of Chemical and Biomolecular Engineering), Dr. Jianhua Zhu (Department of Plant Science and Landscape Architecture) and Dr. George Ude (Bowie State University).

The researchers’ objective is to identify and explain the metabolic, regulatory, and signaling pathways and networks that regulate nitrogen storage and cycling in poplars—an important trait that has the potential to enhance sustainable yield and quality of biomass from trees. As fast-growing, temperate, deciduous trees, poplars have the potential to be an economically viable, non-food source for biofuels and biomaterials. According to Coleman, knowledge generated by the study could advance and accelerate the use of trees with improved nitrogen use as sustainable sources of energy.

The project, which will include graduate students and post-docs, will involve the establishment of a genomic training lab and an applied...
biotechnology course at Bowie State University (BSU). An intensive summer training course will also be established at BSU with participation by both BSU and UM faculty. Each year, three graduates of these training programs will be selected for research internships in one of the project investigators’ labs at the University of Maryland.

**Amy Brown Named Fellow of National Association**

Dr. Amy Brown, Extension specialist, coordinator of the Pesticide Education & Assessment Program, and professor in the Department of Entomology, has been named a Fellow of the American Association of Pesticide Safety Educators. Fellow is the highest honor bestowed by this professional society and is awarded on the basis of superior achievement in research, education, public service, personal achievement, recognition, and service.

Brown was described as “the consummate critical thinker...[who] has bridged research, academic and extension responsibilities through an outstanding career. She has introduced both undergraduate and graduate students to the scientific underpinning of pesticide risk assessment and the practical application of risk communication.”

**Extension Specialists Produce New Diagnostic Field Guide**

An exciting new publication is available through the continuing efforts of two University of Maryland Extension specialists stationed at the Home and Garden Information Center (HGIC). *Broadleaved Shrubs and Shade Trees: Problems, Picture Clues, and Management Options* was written by Dr. Dave Clement, Extension plant pathologist, and Mary Kay Malinoski, Extension entomologist, who both have 20 years of experience at HGIC addressing plant-related consumer concerns.

This user-friendly resource highlights problems involving broadleaved shrubs and shade trees, and includes numerous photos and management options. It will be particularly useful to professional landscapers, master gardeners, and anyone interested in landscaping. Copies can be ordered from the Natural Resource, Agriculture and Engineering Service website at www.nraes.org/nra woodscontent.html.

Clement and Malinoski are now working on two additional publications on needled evergreens and herbaceous plants.

**Ag Agent Establishes Mobile High Tunnel**

Bryan Butler, senior Extension agriculture and natural resources agent in Carroll County, has partnered with Rimol Greenhouse Systems to establish a mobile high tunnel at the Western Maryland Research and Education Center (WMREC)—one of only four such structures in the country. (The others are at Michigan State University, Penn State University, and Cornell.)

Work involving this high tunnel is already gaining national attention. For example, Butler gave a presentation on progress to date and future plans at the American Society for Plastics Congress held at Penn State. He also is sharing the results of investigations conducted using the tunnel with commercial clientele who are pleased that the University of Maryland Extension is responding to their needs.

**Siewerdt Teaches First Brazilian Course in Genomic Selection**

Dr. Frank Siewerdt of the Department of Animal and Avian Sciences was one of two experts
to teach the first course in genomic selection ever offered in Brazil. Held at the Center of Biotechnology of the Federal University of Pelotas, the course drew 18 participants from four institutions and two countries (Brazil and Uruguay). Siewerdt taught one week of a two-week course, covering the latest information on selection theory, marker-assisted selection, and genomic selection.

An outstanding instructor, Siewerdt has been recognized at home as well as abroad, receiving two education awards: the Excellence in Teaching Award from Gamma Sigma Delta, the 2009 Honor Society of Agriculture and the Outstanding Faculty Educator Award from the College of Agriculture and Natural Resources’s Agriculture Student Council.

Lea-Cox Heads USDA Research Grant Team

A research team headed by Dr. John Lea-Cox of the Department of Plant Science and Landscape Architecture has received a U.S. Department of Agriculture Specialty Crops Research Initiative Grant for $5.16 million to investigate precision irrigation and nutrient management for nursery, greenhouse and green roof systems using wireless sensor networks.

This grant, combined with an additional $5.16M in matching funding from various sources, will bring together a multidisciplinary group of engineers, plant scientists, economists, and Extension specialists from five universities and two commercial companies to develop the next generation of tools to precisely monitor plant water use, allow for better control of irrigation water applications, and increase the efficiency of water and nutrient use by commercial growers. The research is tightly integrated with sensor networks in a number of commercial nurseries and greenhouses throughout the United States and will take advantage of the expertise of grower partners and advisory board members to ensure rapid implementation of research results. Full details of the project goals, the university teams, and commercial partners can be found at www.smart-farms.net.

Economist’s Research Reveals “Warrior Instinct” Not Limited to Men

Research by Dr. Ken Leonard of the Department of Agricultural and Resource Economics and colleagues Dr. Uri Gneezy of the University of California – San Diego and Dr John List of the University of Chicago proves that the Western stereotype of the male competitor isn’t universal; rather, the male “warrior instinct” is a matter of socialization rather than instinct.

Building on the results of a University of Pittsburgh study that found that male students were more competitive than females, the researchers conducted an experiment with participants from the Maasai of Tanzania and the Khasi of northeast India. Subjects were first asked to throw balls into a basket and were paid based on the number of successful throws, regardless of how others performed. Next, they competed in a tournament in which only the most successful individuals were paid. Lastly, participants chose whether, for the final round, they’d prefer to get paid for each ball successfully thrown in the basket or to compete in a tournament.

Among the Maasai, a patriarchal society of cattle herders that considers wives less valuable than a man’s cattle, the researchers found a male preference for competition that was comparable to that of University of Pittsburgh undergrads. By contrast, among the Khasi, a matrilineal culture that centers around the mother’s house and in which both inheritance and clan membership are passed on through daughters, the pattern reversed itself—it was women who preferred competition. For more information about this research, go to http://www.slate.com/id/2234066/.
Shirmohammadi Named Associate Dean for Research

Dr. Adel Shirmohammadi has been appointed associate dean for research and associate director of the Maryland Agricultural Experiment Station (MAES) for the College of Agriculture and Natural Resources (AGNR). In his new role Shirmohammadi will administer AGNR’s research programs on campus and in eight centers throughout the state. He will coordinate and promote departmental and multidisciplinary research programs, work to secure grants and funding, and support Extension and academic units.

“I am so pleased to welcome Adel to my administrative team,” says AGNR dean Dr. Cheng-i Wei. “His past experience in the college, dedication to quality research, and commitment to standards of excellence make him ideally suited to this position, and I look forward to working with him to take our excellent college-wide research efforts to the next level.”

Shirmohammadi’s appointment brings his University of Maryland career full circle. He joined the Department of Agricultural Engineering in 1986, later transitioning to the Department of Biological Resources Engineering (administered jointly by AGNR and the Clark School of Engineering), and then to the Clark School with the launch of the Fischell Department of Bioengineering in 2006. He most recently served as associate chair and director of the Undergraduate Program of the Fischell Department of Bioengineering.

“The decision to apply for and then accept this new position has been bittersweet,” says Shirmohammadi. “On the one hand it means leaving a great department and wonderful colleagues in the Clark School I’ve worked closely with over the past several years. On the other hand, it means getting reacquainted with past AGNR colleagues, plus the excitement of new challenges.”

Shirmohammadi has taught undergraduate and graduate courses on water resources engineering, flow-through porous media, numerical methods, and senior capstone design. Awards for his work in the classroom include the Certificate of Teaching Excellence from the Center of Teaching Excellence and the Department of Biological Resources Engineering’s Outstanding Departmental Teaching Award.

Hartsock Scholarship Established

A new scholarship fund has been established by Dr. Thomas Hartsock, former faculty member in the College of Agriculture and Natural Resources. The Thomas Hartsock Animal Management Endowed Scholarship Fund is available to any undergraduate student who is studying for a non-veterinary career, related to the care and management of livestock. The student must either be enrolled in the Department of Animal and Avian Sciences or the college’s Institute of Applied Agriculture (IAA).

From 1979 until 2007, Hartsock devoted himself to research and teaching students in the Department of Animal and Avian Sciences. At the time of his retirement from the University of Maryland, he held the positions of associate professor, Extension specialist, and IAA director. He has had a long-standing belief in “hands-on” applied learning for students in both the two-year and four-year programs.

Kenworthy Appointed PSLA Chair

Dr. William Kenworthy was appointed chair of the Department of Plant Science and Landscape Architecture, effective September 1, 2009.

Kenworthy has served as acting chair of the department since July 2006. During this time, he has led the department through its reor-
Meng has served as interim JIFSAN director since 2006.

Under Meng’s leadership, JIFSAN has experienced tremendous growth in its international programs and has increased its extramural funding to more than $3 million in FY10. He has built strong collaborative relationships with the federal government, industry, and international partners in expanding JIFSAN’s food safety training programs both locally and globally. He also has facilitated research collaborations in the areas of food safety and nutrition between UM faculty and FDA scientists and with other academicians.

Meng has memberships in numerous national societies, boards, and committees. He has served on the editorial boards of the *Journal of Food Protection* and *Applied & Environmental Microbiology*; was appointed to the National Advisory Committee on Microbiological Criteria of Foods by the Secretary of the U.S. Department of Agriculture; and serves on the National Academies’ Committee on Review of Risk-Based Approach to Public Health Attribution.

Lachenmayer Named FSNE Acting Director

Lisa Lachenmayer has been appointed acting director for University of Maryland’s Food Supplement Nutrition Education Program, effective October 1, 2009. The director’s position has been held by Meredith Pearson for more than 10 years. Dr. Pearson has chosen to retire from the position to pursue other interests at this time.

Lachenmayer has been employed by the University of Maryland Extension since 1998, working in Baltimore and Prince George’s counties before joining the state FSNE team. She has served as FSNE curriculum development and outreach coordinator since 2003 and has been actively engaged in the administration of the FSNE program for the past several years.
Extension Unveils New Name and Logo

What’s in a name? Despite Shakespeare’s assertion that “a rose by any other name would smell as sweet,” an organization’s name can mean a great deal in terms of its identity, marketing efforts, and ability to thrive.

There’s no doubt that the University of Maryland (UM) is a well-recognized name, or “brand.” And in an effort to strengthen public recognition of its university affiliation, the organization formerly known as Maryland Cooperative Extension has been renamed the University of Maryland Extension (UME).

“Extension programs are based in the College of Agriculture and Natural Resources (AGNR) at the University of Maryland, College Park, and at the University of Maryland Eastern Shore and are delivered to state residents in every county and Baltimore City,” says Dr. Nick Place, associate dean and associate director of UME. “Our new name formally recognizes this connection and Extension’s role as the outreach vehicle of university research and teaching throughout both campuses, the University of Maryland System’s many institutions, and across the entire state.”

With the new name comes a new look, including primary and secondary logos. But don’t worry; we haven’t changed our focus: Maryland residents. If anything, says Dr. Place, we’re working to keep UME even more responsive to the needs of the community, economy, and environment by focusing on four impact areas:

- local food and agricultural systems,
- environment and natural resources,
- healthy living, and
- resilient communities.

Unbiased, research-based programs related to these impact areas are available through offices in the city of Baltimore and all 23 Maryland counties. The traditional Extension programs of 4-H Youth Development, Family and Consumer Sciences, Sea Grant Extension, Agriculture, Home Horticulture, and Natural Resources will serve as keystones in UME’s client-needs-focused efforts.

Editor’s note: Page 3 of the summer issue of Momentum included a photo of AGNR student Matt Kepler performing a song he wrote for the gala celebrating the University of Maryland’s designation as an arboretum and botanical garden.
H1N1 (swine flu) may be getting all the attention these days, but when it comes to potential long-term medical problems, Lyme disease might be considered a bigger public health threat. Fortunately, researchers like Dr. Utpal Pal and his research team at the Department of Veterinary Medicine at the University of Maryland, also known as Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM), are on the front lines of the fight against this insidious illness.

Lyme disease was first described in 1977 following the investigation of a cluster of arthritis cases among children living near Lyme, Connecticut. Further study indicated that this arthritis was a late manifestation of a multisystem disease caused by the bacterium *Borrelia burgdorferi* and transmitted by ticks belonging to the *Ixodes scapularis* tick complex—also referred to as blacklegged or deer ticks.

According to the U. S. Centers of Disease Control and Prevention (CDC), 9,908 cases of Lyme dis-
ease were reported in the United States in 1992, and 19,931 in 2006—an increase of 101 percent. Last year, CDC reported a total of 35,198 human cases of Lyme disease in United States, which translates to 31 cases per 100,000 Maryland residents. Dr. Pal believes that current CDC estimates of 25,000 to 30,000 cases could reflect only a fraction of the people actually infected since many doctors don’t always report the cases. “I suspect the actual figures are substantially higher,” he says.

Lyme disease is now the most commonly reported vector-borne illness in the United States. If left untreated, human infection can lead eventually to crippling arthritis; cardiac abnormalities, including atrioventricular heart block; and such serious neurologic conditions as meningitis, facial palsy, and encephalopathy.

Fortunately, if Lyme disease is diagnosed at the early stages of infection, antibiotic therapy is usually effective. However, serious health complications can result from false-positive diagnoses and inappropriate treatment. And for reasons that are not completely understood, some patients require a longer antibiotic treatment regime spanning a number of months. Another subset of patients also develop chronic symptoms that are unresponsive to antibiotics and possibly result from post-infection
autoimmune complications. A vaccine to prevent human Lyme disease is currently unavailable.

Ticks stand second only to mosquitoes in their ability for worldwide pathogen transmission causing diverse human infections. Deer ticks live for almost 2 years and feed just three times: once as a larva, once as a nymph, and once as an adult female. (Males die as unfed adults.) They are not born infected with Borrelia; rather, they become infected themselves from feeding on infected hosts—usually wild rodents in the United States, most often white-footed mice, which harbor populations of the bacterium but are not harmed by it. According to Pal, once infected, wild mice maintain a high enough population of bacteria in their skin and throughout their life to cause transmission back to ticks, making them key to the continuation of the bacteria’s life cycle. Deer, on the other hand, while preferred hosts to adult-stage female ticks, don’t maintain enough bacteria in their skin and clear the infection too rapidly to make them essential to the continuation of the disease. Adult female deer ticks only mate while feeding on large mammals like deer, so the presence of ticks, wild rodents, and deer in a particular geographical region are essential to maintaining Borrelia’s natural life cycle.

In humans, the bacteria remain in the bite site for a week or two, causing a localized “bulls-eye” rash in many, but not all, victims. “In fact,” says Pal, “a significant percent of people are completely asymptomatic during the early phases of the disease.” Next, the bacteria do two different things: Some spread through and colonize in the skin layer of the entire body while others move into the blood stream and where they are transported into joints and many other internal organs.

Interestingly, Lyme disease isn’t caused directly by \textit{B. burgdorferi}, which, as far as scientists know, doesn’t produce any kind of toxin or other harmful causative agent. But as some of the bacteria travel through the blood stream and into different organs, the body’s immune response responds vigorously and sends huge numbers of blood cells, such as neutrophils, macrophages and lymphocytes to these locations, where they in turn cause inflammation. Symptoms are slow and varied because immune response varies considerably among individuals.

\textbf{Attacking Tick Survival Strategies}

Dr. Pal and his team at the VMRCVM’s Avrum Gudelsky Center at the University of Maryland are investigating how \textit{B. burgdorferi} survives in ticks (the vector) and infects mammalian hosts such as mice, dogs, horses…and humans.

“Borrelia is an unusual bacterium in that it can adapt to and survive in extremely diverse environments,” says Pal. “Let’s face it, ticks and mammals are very different, not only physically but also in terms of their immunological systems.”
“Ticks and mammals are very different, not only physically but also in terms of their immunological systems.”

– Utpal Pal
cific set of clothes; if you travel to Hawaii, you change your clothes to something more appropriate to the environment. In our work, we’re trying to target specific molecular components of clothing—say the button of a jacket—and eliminate them to find out what impact this has on the survivability and infective capability of the bacteria.”

This work involves the use of tick, mouse, and bacteria colonies. “This approach allows us to mimic the entire natural life

explains one of Pal’s graduate students, Adam Coleman.

Under Pal’s guidance, he and other members of the research team are growing Borrelia outside the tick, in a test tube, modifying its genetic structure, injecting the modified bacterium in mice, and allowing the ticks to feed on the infected mice. According to Coleman, scientists have no idea what 60 to 70 percent of the bacterium’s genes do, so much of the research team’s work involves trial and error. “We make strategic breaks in the bacteria, knocking out selected genes, then see if the modification alters the bacteria’s ability to survive in ticks and mice.”

Such work is not new to Pal, who is following earlier work on the canine Lyme disease vaccine. In ticks, Borrelia produces a specific outer surface protein, called OspA, that anchors it to the gut wall. Recombinant OspA vaccine induces antibodies in the host that enter the guts of infected feeding ticks and prevent the transmission of Borrelia from the vector to the host. Later,
by disrupting this protein using genetic techniques, Pal and other researchers were also able to prevent the bacteria from effectively colonizing in ticks, thus breaking the life cycle. That body of work contributed to the understanding of the function of the antigen selected for the vaccine. The vaccine is used successfully on dogs but presented some autoimmune problems in humans. Consequently, although the pharmaceutical company received approval from the U.S. Food and Drug Administration (FDA) to market the OspA vaccine for human use, reduced sales and the specter of lawsuits led it to cease production.

But Pal and his current research team have identified the role of another protein that affects Borrelia’s survival not only in ticks, but mammals as well. The pathogen produces this protein all through the natural infection cycle involving ticks and mammals. Experimental studies revealed that Borrelia does not seem to require this protein to survive in the laboratory medium but once introduced in a mouse host or in a tick, it quickly dies without this protein. “It appears that the function of this protein is indispensable for infection and tick-host transmission,” says Pal. He is hopeful that this protein may lead to the eventual development of an effective target for a human vaccine or drug development against Lyme disease. But just in case…his team also is working to develop a better diagnostic technique for identifying the disease. The number of bacteria are often so low initially that traditional diagnostic tools don’t work. A more sensitive test could lead to quicker treatment and fewer long-term complications.

Recently Pal’s group filed multiple patents with the university’s Office of Technology Commercialization that describe the importance of a few Borrelia genetic markers which will serve as new targets for Lyme disease diagnosis and prevention.

Editor’s note: Pal’s most recent work is highlighted on the front cover of the October 15th issue of the Journal of Infectious Diseases.
My name is Lauren Moffatt and I received a bachelor’s degree from the University of Maryland. When I think about my time at Maryland, the people and places that enter my mind most often are those associated with the College of Agriculture and Natural Resources (AGNR). My professors and advisors—not to mention the administrators (especially Elizabeth Weiss) and my peers—made me feel like I was really at a small school where everyone knew each other and there was a distinct sense of community and even family. Because of this, I feel like I got the best of all worlds: a big state school, with all the resources it affords, and also a small school that offered an intimate and personalized educational experience.

Like all AGNR students, I was encouraged to investigate and take advantage of different opportunities, no matter what they might be. This type of support, especially from faculty like Dr. Mark Varner and Dr. Mary Ann Ottinger—complemented by expert advising from Dr. Bruce James—led me to really explore a variety of options, including a pre-veterinary path as well as an environmental research path. Working in Dr. Bill Lamp’s entomology lab with other undergraduates, as well as post-docs like Dr. Nick Baer and Dr. Laurie Alexander, fostered my interest in research, both laboratory and field...especially at the college’s Western Maryland Research and Education Center in Keedysville.

I also was encouraged to get involved in other opportunities across campus, including travelling for a...
January term in Belize with a group that was primarily made up of College Park Scholars from the College of Chemical and Life Sciences, under the direction of Dr. Lee Hellman. This was perhaps one of the most valuable experiences I had as an undergraduate, because of the amazing ecological and environmental education, as well as the cultural and social one. The trip opened my eyes to the larger world, where there are people and places and ecosystems that matter just as much as the ones I am more familiar with.

Essentially, it was a combination of the people, the academics, and the guidance in AGNR that made the difference for me, giving me the confidence and background that I needed to pursue a graduate school education. I joined the Dr. Kathleen Arcaro Laboratory at the University of Massachusetts, Amherst, where I completed my Ph.D. in environmental toxicology in the Veterinary and Animal Sciences Department in May 2008. I suppose in hindsight my graduate school experience mirrored my UM experience...big school, lots of options and resources, but small community and family therein.

And the totality of my educational experiences led me eventually to my current job as coordinator for the Berkshire Environmental Resources Center (BERC) at the Massachusetts College of Liberal Arts (MCLA). BERC was established in 2005 to strengthen the educational experience in environmental areas and sustainability, both for students at MCLA, and for the community that benefits from BERC programming.

I advise interns, develop environmental curriculum, oversee sustainability issues on campus, and work with environmental and Science, Technology, Engineering, and Mathematics (STEM)-related organizations. I interact every day with students, faculty, staff, and members of the public from the community, state, and regional level. I like to think that every day I convey to these people the environmental, scientific, and social principles that I gained at the University of Maryland College of Agriculture and Natural Resources.
Walking on the Wild Side

Some Graduates’ Careers Take Them Even Further Afield

My name is Matt Snider, and I’m from Middlebury, Vermont. Going into college my plan was to attend vet school after graduation, so I enrolled as an animal science major with a pre-veterinary concentration. But by the time I graduated, my academic and extracurricular experiences had led me in—and prepared me for—an entirely different direction.

During my last year and a half at Maryland, I worked as a zookeeper aide at the Smithsonian National Zoological Park (National Zoo) on Saturdays and Sundays...an opportunity made possible by the university’s proximity to Washington, DC. I was assigned to the Asia Trail section, where I became increasingly interested in wildlife conservation work. Last summer I worked as a paid intern in the National Zoo’s nutrition lab, an experience that further sparked my interest in research involving exotic animals. I realized that my passion lay with animal conservation rather than veterinary medicine.

Fortunately, a friend and classmate who was gathering information about research organizations around the world suggested I look into Global Visions International because, as she told me, “It looks right up your alley.” I followed her suggestion and ended up applying to take part in—and being accepted into—a ten-week volunteer program at the organization’s Karongwe Game Reserve in South Africa.

During my sixth week there, I applied for a research internship, which is only available to volunteers in the ten-week program. The competition was tough because all the people participating in the program were enthusiastic about bringing their knowledge into conservation, but I felt like my AGNR studies and extracurricular activities put me ahead of most of the competition. And it turns out I was right.

I was awarded the internship and am now living with other staff in the bush 24/7.

The most appealing part of the internship is the opportunity to train the next group of volunteers in the research projects we’re conducting. One of my main responsibilities will be to train them how to properly input the behavioral data we gather to ensure that it’s uniform and can be correctly analyzed. I will also be in charge of helping them adjust to the bush as we only have electricity for a few hours a day via solar panels or on occasion an emergency generator. I also have to brief them on safety concerns while at base because we live on the reserve and are frequently visited by hyenas, elephants, and leopards, especially in the late evenings and at night.
There are a few different projects being conducted at this research base. My favorite is the large predator study, which involves observing the behavior of the reserve’s seven resident cheetahs, six resident lions, and three of the numerous resident leopards to establish how they maintain home ranges and how their behavior changes when in close proximity to members of the same and different species. We’re also conducting a prey survival study to determine how the cyclic patterns of the prey populations affect the health and behavior of the predators.

Big cats aren’t our only research subjects. We’re currently doing a “hyena focus” because the hyena pack on the reserve has a litter of cubs that are becoming more independent of their parents. We want to establish a family tree to determine which cubs belong to which parents, a goal that could be hampered by hyenas’ complex social structure.

This job has given me an opportunity to apply so much of the knowledge that I gained as an animal science major. Some of the classes—like Wildlife Disease Management and Animal Behavior—have obvious applications, but others like Anatomy have proven indispensable when we are trying to identify the species of some of the kills and all we can see are parts of the musculature and skeletal structure.

Working here in the field is also a brilliant networking opportunity. I’ve met dozens of like-minded individuals and already have contacts that should prove valuable if I decide to apply to wildlife conservation graduate programs in the United States, Great Britain, or here in South Africa...something I plan to do at some point.

In the meantime, I’m thoroughly enjoying working—and learning—in the field. Perhaps the most important thing I’ve learned so far is that working for the betterment of wildlife involves maintaining good interactions with people. It is people who are in charge of the spaces animals live in, the funding they receive in research and care, and the rules and regulations that can either harm or help them. My experience as an undergraduate at the College of Agriculture and Natural Resources has given me the academic knowledge to have a firm understanding behind the reasons for and concepts of wildlife conservation and it has refined my social skills to allow me to best apply this knowledge in educating and co-opting others to improve the well being of wild animal populations.

Editor’s note: To learn more about what the College of Agriculture and Natural Resources has to offer, go to agnr.umd.edu.
Most people in the horticulture community are familiar with the saying, “Right plant, right place.” The success of the University of Maryland Extension’s (UME) Grow It Eat It campaign might be described similarly—as “Great program, great timing.”

The current downturn in the economy has fueled a national food gardening frenzy. Every week, and sometimes daily, there are reports in the media about some aspect of food gardening.

And Maryland Master Gardeners were ahead of this cultural curve, cultivating the idea of a food gardening education program back in November 2008. By the time First Lady Michelle Obama planted her vegetable garden on the White House lawn, 500 Maryland Master Gardeners had already been taught how to teach basic food gardening to the public. That group of Master Gardeners then taught 159 classes to more than 2,500 Marylanders in 18 counties and Baltimore City on how to grow their own healthy food. Among the “students” was Maryland’s First Lady Katie O’Malley, who started her own kitchen garden in Annapolis with the help of Anne Arundel County Master Gardeners. At the Maryland State Fair, Gov. O’Malley said they were still enjoying fresh vegetables from the garden.

Since what is Grow It Eat It?

“Basically, the mission of Grow It Eat It is to help Marylanders improve their health and save money by growing fresh vegetables, fruits, and herbs using sustainable practices,” says Jon Traunfeld, director of UME’s Home and Garden Information Center (HGIC) and state coordinator of the
Maryland Master Gardeners Program. “Eventually, we’d like to see one million Maryland food gardeners producing their own affordable, healthy food.”

Supported by Extension staff and faculty, Master Gardener volunteers are leading the way, forming teams across the state to teach and promote backyard and community food production. The HGIC staff provides the back-up resources by answering questions of new and experienced food gardeners via phone (1-800-342-2507) and e-mail. A Grow It Eat It website—growit.umd.edu—is packed with basic food gardening information that people want; more than 50,000 user sessions were logged in just five months! And current gardening happenings around Maryland are posted by 11 contributors to the Grow It Eat It blog at groweat.blogspot.com.

**New Ways to Spread the Word**

While thousands of vacationers relaxed at Maryland’s mountains or beaches over the summer, Alix Watson and Emily Heimsoth, HGIC student interns from the University of Maryland School of Journalism, efficiently, enthusiastically, and skillfully modernized the way the Grow It Eat It message is shared. First, they captured gardening footage and developed 29 how-to and informational videos. Topics include soil testing, no-till/lasagna gardening, vertical gardening, snakes of Maryland, turtles of Maryland, and bed bugs. As of the end of August, more than 400 unique viewers have accessed these videos since the first one was posted on June 23.

Watson and Heimsoth also helped narrow the generation gap of Extension’s gardening audience by targeting the younger, tech-savvy population through such social media as Facebook and Twitter. The Grow It Eat It Facebook page currently has 209 fans and its Twitter account has 133 followers…and the numbers continue to grow. Will you be among them?
From parks, schools, their place of business...to their own backyard, Maryland residents will soon be peering under rocks, wading in ponds, and peeking through binoculars. And it’s all because of a new 40-hour science-based training program being developed by the University of Maryland Extension to turn inquisitive individuals into environmental stewards. Development of this Maryland Master Naturalist Program—one of more than 25 such programs being implemented across the nation—began in 2005, and a pilot volunteer training session is planned for next year.

You ask, “What might a Master Naturalist do?” The answer would be, “Just about anything that involves the natural world...most likely requiring a note pad, a good pair of tennis shoes, a stash of granola bars, and above all a sense of adventure!”

As the program assistant for this new educational offering, I’ve taken on the task of scoping out activities that residents could participate in to fulfill the 40 hours of volunteer service required for the program. On a beautiful weekend in July I had an opportunity to engage in one such activity: pelican banding. The bird banding program helps determine the population and geographic range of the Brown Pelican (*Pelecanus occidentalis*). Each banded pelican receives a standard metal band with a number that is used to identify the specific bird.

I was part of a group of 27 volunteers that included representatives of the Maryland Department of Resources (DNR), Natural Heritage Program, U.S. Fish & Wildlife Service, Baltimore Aquarium, U.S. Army Corps of Engineers, University of Maryland, and Venture Scouts, along with private biologists, conservationists, photographers, and local birders. Led by DNR ecologist David Brinker, and John Weske, one of the lead bird banders for the Chesapeake region, we headed to an island in the Chesapeake with the goal of banding 1,000 baby pelicans. Our instructions were simple: Round ‘em up and tag ‘em.
Volunteers were assigned to be “corrallers,” retrievers, holders, or banders. The “corrallers” formed a large circle around a group of baby pelicans. Each retriever picked up a baby or two—or sometimes three—and delivered them to the holders, who then held them steady for the banders. Using pliers, the banders promptly secured a band around each baby’s right foot before releasing them. After three hours of gradually working our way inland, we succeeded in banding 983 chicks!

Banding baby chicks is muddy and stinky work, but it was also a very enjoyable and enlightening experience...just the kind of adventure Maryland Master Naturalists would be proud to be a part of. I’m looking forward to participating in other equally interesting and valuable outings as I add to my growing list of volunteer activities. I’m convinced that the Master Naturalist Program will make Marylanders more aware not only of the opportunities their state has to offer, but also of the greater benefit of global involvement in protecting our environment for our children and grandchildren.

To learn more about pelican banding, visit the Patuxent Wildlife Research Center (bird banding lab) at http://www.pwrc.usgs.gov/BBL/homepage/btypes.cfm.

For information about the Maryland Master Naturalist Program, e-mail Wanda MacLachlan, State Master Naturalist coordinator at wtm@umd.edu or Rondalyn Reeser, Program Assistant at rreeser@umd.edu (410-531-0534).

Picture Perfect

Rondalyn Reeser, Maryland Master Naturalist program assistant, helps Antonio (Tony) Quezon band a brown pelican. Tony has been a raptor bander since 1990. He is an engineer and scientist by training and has a strong interest in seeing the plight of birds and their habitat accurately reported in the scientific and popular literature. He believes that banding projects can provide a wealth of information pertaining to bird populations, i.e., health of individuals and populations, longevity, habitat use/preference and migration habits.
Robert L. (Bob) Jones ’50 was recently honored by the National Association of County Agriculture Agents with induction into the NACAA Hall of Fame. The NACAA Hall of Fame Award recognizes NACAA individuals for demonstrated commitment, dedication and effective leadership in job performance as an outstanding educator, consideration for association involvement at both the state and national level, and outstanding humanitarian service.

Bob started his career in 1950, in Prince George’s County as a 4-H Agent. Soon after, he took a short reprieve to serve his country in another fashion—as an officer on active duty in the U.S. Air Force. He returned to work with the University two years later as an Agriculture Agent. He continued to work in that role for 34 years, most of it in Carroll County, MD. As a retired county agent, Bob continued his work, adding much to his community and profession.

Many say that the mark of a truly exemplary leader is not the number of activities conducted but rather the number of accomplishments achieved. Bob’s record as an Extension Agent spanning 34 years clearly demonstrates a strong history of accomplishment that is still very much part of the foundation of today’s agricultural generation.

Bob was instrumental in the establishment of an award-winning Dairy DHIA program and initiating young farmer leadership classes for the development of future agricultural leaders. Several of the environmental programs he started are still operating today. However, throughout it all, Bob
never lost sight of the critical mission of a county extension agent—to work directly with the individual farmer to solve problems and provide information or assistance that helps people help themselves. As a reflection of his work, he was awarded the Distinguished Service Award in 1971 by his Extension peers. Bob’s hard work allowed him to achieve every level of promotion in the Extension Service, starting from Assistant Agent through Principal Agent, and in retirement was awarded Emeritus Faculty status.

Bob’s commitment to the Maryland Association and the National Association is admirable. Although retired for nearly 25 years, Bob has continued to serve his state association. He is a continual fixture at state meetings. Bob has an incredible record of service—attending 49 national meetings and 42 consecutive meetings. He recently attended his 50th NACAA meeting in Portland in September where he was presented with the Hall of Fame honor. He has served at the national level with distinction as well. He has been a part of numerous committees and as chairman of the 1973 national meeting. He was elected and served on the national board as vice-president, president-elect, and president.

Bob’s involvement in the community is also exemplary. He has been active in numerous civic organizations throughout his life. Bob has been involved in leadership positions in his church since moving to Carroll County. Bob’s current endeavor is working as chair of a community project to move a historic barn to the Carroll County Agricultural Museum. He has led the effort to raise over $400,000 to support this endeavor.

Dr. John Buric ’52 was inducted into the Maryland Hereford Hall of Fame at the 2009 Maryland Hereford Association in March. Dr. Buric joins an elite group of cattlemen who have been inducted since the Hall of Fame began in 2004. Dr. Buric was a professor with the animal sciences department at the University of Maryland from 1948 to 1983. He currently owns Buric’s Angus Beef farm with his son, John, in Montgomery County, near Woodfield. He also still owns a 236-acre farm near Morgantown, in his native West Virginia. Throughout his professional career at the University, he was supportive of the cattle industry through numerous Extension programs. He served as treasurer of the Maryland Hereford Association for 24 years.

Terrie Trimmer Shank ’88 was named the 2009 Maryland Outstanding Agriculture Teacher of the Year at the annual meeting of the Maryland Agriculture Teachers Association. Terrie teaches at Clear Spring High School in Washington County. She will compete at the national level later this fall. Other AGNR alumni recognized at the summer conference were Jim Ferrant ’77 & ’86 for Outstanding Service and David A. Miller ’66 & ’72 for Lifetime Achievement. Outgoing MATA President Mike Harrington ’76 was presented with the leadership award, having completed two terms as president.

AGNR’s Institute of Applied Agriculture was recognized as the Outstanding Post-Secondary program and will also compete at the national level.
2009 Tailgate

The Campus Farm was the perfect setting for the AGNR Tailgate held prior to the Rutgers football game. The pre-game barbecue provided a wonderfully relaxed opportunity to visit with fellow alumni, faculty, staff, and current AGNR students. Even though the sky was threatening rain, the atmosphere was bright and sunny for those reconnecting with AGNR!

As a special feature during the tailgate, Eric Almquist ’96, AGNR Alumni Chapter President, presented a check for $2,500 for the AGNR Alumni Scholarship Fund to Sheila A. Brown who retired October 1, 2009, after 23 years with AGNR. Sheila’s most recent and long-term position in AGNR was as the scholarship coordinator. Her enthusiasm for all aspects of AGNR—donors, students, faculty, staff, and alumni was noted earlier this spring when she was made an AGNR Honorary Alumnus. Sheila and her husband, Ray, will be moving to Phoenix, Arizona, to be near family.

Another highlight of the afternoon were several energetic games of “tailgate horseshoes.” Dr. and Mrs. Wei were matched against IAA Acting Director, Glori Hyman, and Associate Dean Leon Slaughter. Matt Koerner was hoisted to the top of the shed near the dairy barn to retrieve equipment tossed with great enthusiasm by Mrs. Wei.

AGNR Alumni & Friends Email Listserv Being Established...Let Us Hear from You

We are always amazed and proud of the activities and many accomplishments of our AGNR Alumni! Please take a moment to share your news with us by either completing this form or contacting us. You can also keep us up to date on the University of Maryland AGNR Alumni Chapter’s Facebook page http://tinyurl.com/agnralumni

We look forward to hearing from you.

UPCOMING EVENTS

As another semester rolls along, we are already making plans for 2010! Please plan to join us for the Annual AGNR Reunion and Awards Celebration on Wednesday, April 14, 2010, at the Samuel Riggs IV Alumni Center. The evening will celebrate the accomplishments of upcoming graduating students as well as faculty, alumni, graduate students, and undergraduate students. The Silent Auction will once again support our AGNR student clubs and scholarships.

Another date to put on your calendar is Ag Day/ Maryland Day—Saturday, April 24, 2009. The Welcome Back Breakfast is another opportunity to reconnect with fellow alumni and visit with current students and faculty.

In the meantime, please feel free to contact me with news, questions, and ideas on how the alumni chapter can better keep in touch and serve you.

I look forward to hearing from you.

Gail P. Yeiser
Assistant to the Dean for Alumni & External Relations
1104 Symons, College Park, Maryland 20742
301-405-2434, gyeiser@umd.edu
AGNR Alumni—Good to Hear from You!

Name:  First______________________ Middle___________________ Last _______________________

Maiden or Name at time of Graduation: _____________________________________________________

Degree(s) and years of graduations and majors/specialties _____________________________________

Current professional specialty: ____________________________________________________________

Current Volunteer Roles__________________________________________________________________

Home Address: _____________________________________________________________

City____________________________   State ________________________  Zip____________________

(Is this a new address within the past 6 months?) ___yes   ___no

Home Email: __________________________________________________________________________

Employer: ____________________________________________________________________________

Job Title______________________________________________________________________________

Business Address_______________________________________________________________________

City____________________________   State ________________________  Zip____________________

Business Email: _______________________________________________________________________

(May we include this on the AGNR and Friends Listserv? ___yes   ___no)

Phones: ___________________ home ___________________ business ___________________ mobile___________

News or information that you would like to share with other alumni or Dean Wei:

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

Please complete this page, detach and return to:

Gail P. Yeiser
College of Agriculture and Natural Resources
1104 Symons Hall
College Park, MD  20742
FAX:  301-314-9146     Email:  gyeiser@umd.edu
The air was full of excitement at Turf Valley Resort and Conference Center on September 21 as retired AGNR–University of Maryland Extension faculty, staff, families, and friends gathered for the “Old Tyme Extension Reunion.” Dick and Karen Wooten garnered the longest journey having come from Kansas for the reunion. Drs. Albin Kuhn and Frank Bentz were lauded as the senior statesmen of the group. Prior to lunch those who are no longer with us were remembered. The volume in the room was evidence that there was a great deal of catching up, and indeed, photos of children, grandchildren and great grandchildren were at the ready! Extension memories were shared by several in attendance and all noted that the most memorable experiences were related to the great colleagues and lifelong friendships that evolved from involvement with the University of Maryland and Extension.
For the second year, a portion of the AGNR dairy herd was on exhibit at the Maryland State Fair. Each afternoon milk cows from the AGNR herd were milked for the public to learn where milk comes from.

A highlight of the exhibit was the opportunity for the public to help name the newborn calf. Over 500 ideas for names were submitted in the first two days of the fair. The top five—Oreo, Daisy, Molly Moo, Cookie, and Bella—were voted on by nearly 5,000 fairgoers during the balance of the fair and the newborn calf was named “Oreo.”

In addition to the dairy herd, AGNR was a partner with the Maryland 4-H Foundation, the Maryland Agricultural Education Foundation and the State Fair in a new educational area, “U-Learn Farm,” where displays about AGNR program areas and activities for children and families taught fairgoers about agriculture and opportunities related to agriculture and natural resources. AGNR Dean Cheng-i Wei was on hand for several 4-H events during the fair and congratulated 4-H’ers on their accomplishments by presenting AGNR Outstanding in His Field trophies to showmanship contests for beef, sheep, swine, dairy, rabbits, horse, and dog events. He also helped present trophies for judging contests and a wide range of fair competitions. Dr. Wei hosted UM SGA officers at the fair where they learned about the SET—Science Engineering and Technology focus of 4-H with a nanotechnology demonstration by Maryland’s award-winning team.
Ruth Alice Carson Proctor, 78, of Woodbine, Maryland, died October 7, 2009. Ruth served 22 years as a University of Maryland Extension 4-H youth development educator in Montgomery County, and as a 4-H volunteer in both Montgomery and Howard Counties. Ruth was born on October 14, 1930, in Indiana. She moved to the Washington area after being selected as an International 4-H Youth Exchange (IFYE) fellow with the National 4-H Council. She earned her bachelor’s degree from Purdue University and her master’s degree from American University and lived in Ireland during her IFYE experience. She retired from Montgomery County Extension in January 1997 after serving as a 4-H educator and county extension director. Ruth made a lifelong commitment to serve her community through endless hours of professional and volunteer work through 4-H, Phi Mu, and church.

She is survived by her beloved husband of 52 years, Frank B. Proctor; three daughters, Gail Lynn Healy of Durham, NC, Jennifer Ruth Tolson of Mount Airy, and Suzanne Elaine Proctor of Frederick; her brother, John C. Carson of Noblesville, IN; nine grandchildren; and many devoted family members and friends.

A funeral service was held on October 12 at Lisbon United Methodist Church.

Memorial donations may be sent to the Maryland 4-H Foundation Inc., 8020 Greenmead Drive, College Park, MD 20740.

A week prior to her death, Ruth was inducted into the Maryland 4-H Hall of Fame at the 4-H Awards Gala. The following tribute was presented by longtime colleague, Kendra Wells, 4-H Youth Development Specialist, University of Maryland Extension:

"Throughout her 4-H years as a member, volunteer and educator, Ruth has been committed to service at the county, state, local, and national level. In addition to her many years as a 4-H club leader, before and after her years as a 4-H agent Ruth served as a national International 4-H Youth Exchange Assistant at the National 4-H Council from 1955-1956.

"She was a dedicated Maryland 4-H All Star and a founding member of the Maryland 4-H Volunteers’ Association, an organization in which she has been active for the past 10 years.

"As chair of the Maryland 4-H All Star Food Booth at the Maryland State
Fair for 28 years, Ruth provided leadership for a 12-day event that resulted in profits close to $300,000, all of which were directed to the Maryland 4-H Youth Development Program through the Maryland 4-H Foundation, Inc. In this role, Ruth had full responsibility for acquiring the necessary permits, insurance, equipment, and food to ensure the success of this endeavor. She was also responsible for recruiting 4-H All Star volunteers annually for shifts in the Food Booth during the State Fair. In addition to the funds raised to support Maryland 4-H Programs, the Food Booth is an important service to 4-H families and 4-H officials during the state fair, providing access to reasonably priced breakfast, lunch, and dinner options. For many years, the All Star Food Booth volunteers also provided meals for judges and 4-H fair workers at no charge.

"One of Ruth’s many significant contributions to the 4-H youth development profession was her work in volunteer development and management. She took the lead for the development of a 4-H volunteer management system in Montgomery County, one of the first of its kind in the nation. The volunteer management system that Ruth initiated in 1985 remains in place in the Montgomery County 4-H program today and is one of the key reasons this county reaches over 1,500 youth each year through high quality 4-H youth development programs. Many of those 4-H members and families have fond memories of summers spent at 4-H Camp Tawasentha, another of Ruth’s 4-H loves.

"She served as the editor of the National Association of Extension 4-H Agents (NAE4-HA) national publication, News and Views, and co-chaired the 1982 NAE4-HA national conference in Baltimore, MD. Ruth was recognized for her contributions to the 4-H youth development profession with the NAE4-HA Distinguished Service Award and the Epsilon Sigma Phi State Distinguished Service Award. Ruth was a member of the National Development Team for the 4-H Wood Science curriculum and leader guide and she served as a judge in the national 4-H record book competition for many years. As a 4-H volunteer, she was recognized as one of two National 4-H Distinguished Alumni at the National 4-H Congress in Chicago in the early 1970s.

"In her community, Ruth has been an active member of two United Methodist churches in Maryland, serving as president of the Board of Trustees, Council on Ministries Chair, church schoolteacher, and she is a life member of the United Methodist Women. She is especially proud of having taught Sunday school for 35 years. A Purdue University graduate, she was one of five recipients of the Purdue Alumni Citizenship Award in 1975. Ruth was also very active in her Phi Mu sorority as a collegiate at Purdue and served in leadership roles at the national level as an alum.

"Ruth provided leadership for the Montgomery County Extension office, serving as the County Extension Director prior to her retirement."
From her years as a 4-H member, IFYE delegate and Home Economics and 4-H agent in Indiana, to her 15 years of service as a 4-H club volunteer in Montgomery County, Maryland, 22-year career as 4-H youth development educator in Maryland, and 10+ years as a 4-H club leader in Howard County, Maryland, Ruth has made a lifelong commitment to making the best better for her club, her community, her country, and her world. We are proud to induct her into the Maryland 4-H Hall of Fame.”

Michael Joseph Pelczar Jr., 93, a microbiology professor at the University of Maryland who retired in 1978 as vice president for graduate studies and research, died October 13, 2009, at his home in Chester on Maryland’s Eastern Shore after a stroke.

Dr. Pelczar taught microbiology at the university from 1946 until 1966. He published scientific articles and co-wrote microbiology textbooks.

After his U-Md. retirement, Dr. Pelczar spent six years as president of the Washington-based Council of Graduate Schools, an association of hundreds of schools. He then moved to Chester, where he lived on a 180-acre property called Avalon Farm. He continued to write, consult, and garden until his death.

Pelczar, a Baltimore native, was a 1936 graduate of the University of Maryland, from which he also received a master’s degree in bacteriology in 1938. He received a doctorate in bacteriology from the University of Iowa in 1941.

He served in the Army Medical Service Corps in Europe during World War II and retired from the Army Reserve in 1960 at the rank of lieutenant colonel.

Dr. Pelczar was a member or officer of national professional and scientific societies, a past board member and chairman of the Chesapeake Research Consortium, past chairman of the Maryland governor’s science advisory council, and past director of the Maryland Sea Grant program.

He was a founding member of U-Md.’s Phi Beta Kappa chapter and past president of the university’s chapter of Sigma Xi, the scientific research society.

His honors included the American Society for Microbiology’s distinguished service award.

His wife, Merna Foss Pelczar, whom he married in 1941, died in 2007.

Survivors include six children, Ann Markie of Denton, MD, Patricia Haddad of Edina, MN, Rita Pelczar of Marshall, NC, Josephine Clark of Betterton, MD, Julia Swartz of Owings, and Michael R. Pelczar of Chestertown, MD; three sisters, Mary Kozubski of Baltimore, Amelia Pasela of Tallahassee and Wanda Beach of Pikesville, MD; 21 grandchildren; and 13 great-grandchildren.
4-H National Youth Science Day is part of a new public service campaign—“One Million New Scientists. One Million New Ideas”—designed to attract 1 million new youth to 4-H science, engineering, and technology programs by the year 2013. Combined with 4-H’s existing science-based curriculum, this new initiative will arm youth with the technical skills needed to help America maintain its competitive edge in the global marketplace and increase the number of young people who pursue science-related studies and careers.

“Engaging youth early in scientific exploration has been shown to spark a lasting interest in the sciences,” says Denise Frebertshauser, University of Maryland Extension 4-H youth development specialist. “Science can often seem intimidating to young people, but 4-H National Youth Science Day makes it fun, real, and accessible. Kids learn about cutting-edge technologies and then take the next step by applying what they’ve learned in their very own community.”

Maryland Team Wins National 4-H Dairy Judging Contest

Maryland received top honors at the National 4-H Dairy Cattle Judging Contest held as part of the World Dairy Expo in Madison, WI. Leading the team to its first-place finish were Morgan Meisenheimer and Chelsea Davis, who placed third and sixth overall respectively. The Maryland team, which also included Emily Gill and Ariel Taxdal, also won High Team in Reasons competition, with Meisenheimer capturing High Individual in Reasons.

The program is coordinated by Kiera Finucane of the Department of Animal and Avian Sciences, and this year’s team was coached by Loretta Wright, a long-time supporter of dairy and Maryland 4-H from Carroll County.

Maryland Youth Have a “Biofuel Blast” on 4-H National Youth Science Day

On October 7, youth across the state of Maryland joined hundreds of thousands of young people around the nation to simultaneously create biofuel as part of 4-H National Youth Science Day™, which takes place every year during National 4-H Week.
Called “Biofuel Blast,” the experiment, conducted as part of this year’s Science Day, was designed to teach young scientists how cellulose and sugars in plants—such as corn, switchgrass, sorghum, and algae—can be converted into fuel and how alternative energies can be used in their own communities. Maryland’s participating 4-H’ers joined adult volunteers, dignitaries, and faculty and staff of the College of Agriculture and Natural Resources to conduct the experiment at the University of Maryland.

Maryland Places at 2009 National 4-H Engineering Challenge

The 11-member Maryland 4-H Engineering Team tested their engineering skills against 46 other youth from 11 states at last month’s 59th National 4-H Engineering Challenge in Lafayette, Indiana, competing in individual events and then as a team in the 4-H Engineering Bowl.

Three team members—Cynthia Davey, Kathryn Franc and Eleanor Nave—participated in a Robotics Event that was piloted this year. Their two challenges involved building and programing a robot to follow a prescribed course and building a robot and guiding it to pick up a ball and place it into a receptacle via remote control. The Maryland trio placed second in this exciting new event.

The rest of the Maryland team made it into the semi-final round of the Engineering Bowl competition and tied for third place. Individual results were:

- **Aaron Lantz** fourth in computer;
- **Steven Mason** sixth in lawn tractor;
- **Nathan Metz** third in small engines;
- **Jason Talbert** fourth in welding;
- **Eric Tichnell** eleventh in tractor;
- **Greg Tichnell** third in lawn tractor (“Learn to Earn”);
- **Hannah Wolf** fourth in bicycle safety; and
- **Salvatore Zambuto** fifth in welding.

Safety-related knowledge was a major component of each event, which included a written exam, a presentation or parts identification test, and a demonstration-of-skills component (operation of a related vehicle, computer programming, or welding).

Dr. David S. Ross, professor and Extension specialist in the Department of Environmental Science and Technology, served as coordinator of the Maryland group and chair of the National Bicycle Safety Event. Dwayne Murphy, faculty Extension assistant for 4-H Youth Development in Baltimore County, was team chaperone, along with Debbie Franc.
For more information on Academic Programs, contact:

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